

## CLAIMS

1. A weld gun having a base, first and second arms supported on the base for pivotal motion about a common axis extending laterally between the arms, a pair of laterally opposed electrodes carried on the arms and engageable upon pivotable motion of the arms moving the electrodes toward  
5 one another to a closed position, and the improvement comprising:  
a lever supported on the base and pivotable on a second axis spaced longitudinally from the first axis, the lever having ends spaced in opposite directions from the second axis;  
the ends of the lever being connected one with each of the first  
10 and second arms; and  
an actuator connected to actuate at least one of the arms in a pivotal motion;  
whereby actuation of said one arm is operative to pivot the lever to oppositely actuate the second arm in a predetermined manner so that the  
15 arms move the electrodes toward and away from one another.
2. A weld gun as in claim 1 wherein at least one of said ends of the lever is connected with an associated one of the arms through a rod.
3. A weld gun as in claim 2 wherein the rod connects with a resilient member that allows limited variation of the electrode closed position.
4. A weld gun as in claim 1 wherein two resilient members are connected between the lever and the first and second arms.

5. A weld gun as in claim 1 including at least one resilient member between the lever and an associated one of the arms, allowing limited variation of the electrode closed position.

6. A weld gun as in claim 3 wherein the resilient member is a spring.

7. A weld gun as in claim 3 wherein the resilient member is a rubber bushing.

8. A method of spot welding using a weld gun having a base, first and second arms supported on the base for pivotal motion about a common axis extending laterally between the arms, a pair of laterally opposed electrodes carried on the arms and engageable upon pivotable motion of the arms moving the electrodes toward one another to a closed position, the method comprising the steps of:

5 providing a workpiece having a known thickness;

providing a lever supported on the base and pivotable on a second axis spaced from the first axis, the lever having ends spaced in opposite

10 directions from the second axis, the ends of the lever being connected one with each of the first and second arms, and the lever relating pivotal motion of the arms in a predetermined manner so that the arms move the electrodes toward and away from one another in a predetermined relationship;

inputting the predetermined relationship of the electrodes into a

15 controller;

inputting the thickness of the workpiece into the controller;

relating the predetermined relationship of the electrodes and the thickness of the workpiece and positioning the electrodes at calculated distances on opposite sides of the workpiece to contact the workpiece

20 simultaneously on the opposite sides;

actuating the electrodes to simultaneously engage the workpiece;  
and  
running electrical current through the workpiece between the  
electrodes to create a spot weld.